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AMSAT NEWS SERVICE
ANS-038

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor(a)amsat.org

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ANS-038 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 038.01
To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE Suite 1653
Washington, DC 20002

DATE 2021 Feb 07

RadFxSat-2/Fox-1E Is Designated AMSAT-OSCAR 109 (AO-109)

On January 17, 2021, the RadFxSat-2 cubesat was launched on a LauncherOne vehicle off the coast of California. RadFxSat-2 is a joint mission of AMSAT and the Institute for Space and Defense Electronics at Vanderbilt University. The satellite carries a telemetry beacon and a linear transponder, along with radiation effects experiments. The telemetry beacon has not yet been heard, but the transponder is partially operational at reduced signal strength. Work continues to recover the telemetry beacon and characterize the transponder with the goal of opening it for general use. AMSAT hereby designates RadFxSat-2 as AMSAT-OSCAR 109 (AO-109).

Testing and characterization of RadFxSat-2/AO-109 continues. After user reports and additional verification that the linear transponder is at least

partially functioning with a low level downlink signal, the Engineering and Operations teams made the official designation. Of the several objects have been suspected (D, C, and M), with Object C being suggested recently by Drew Glasbrenner, KO4MA. Recently, these satellites have sufficiently spread apart to allow testing to determine which object is RadFxSat-2/Fox-1E.

During the 2 Feb 2021 0240 UTC passes, command station Mark Hammond, N8MH, compared Objects D, C, and M for the "best fit" for received signals with Doppler correction on both the uplink and downlink frequencies for each of the candidate objects. Objects D and M were quickly eliminated from further consideration, due to poor frequency predictions of Doppler correction compared to observed signals. The clear best fit is Object C, which is known OBJECT C, INTELDES 2021-002C, and NORAD CAT ID 47311. Therefore, AMSAT is happy to identify Object C/2021-002C/47311U as RadFxSat-2/Fox-1E and make the designation AO-109. Thanks to Alan Biddle, WA4SCA, for support during the identification.

The Engineering and Operations teams appreciate the community's cooperation thus far and affirm the request that users do not attempt to use the transponder until further notice. The proper identification will allow further characterization of the satellite's condition through additional testing.

(ANS thanks Mark L. Hammond, N8MH, AMSAT Director and the Engineering and Operations Team for the above information)

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CAPE-3 Updates and iGate Request

Rizwan Merchant, KF5BNL, reports: "It seems CAPE-3 is indeed healthy in orbit. Our power system seems to be working as intended and UHF transmitters seem healthy. However, we're suspecting the VHF radio is dead on arrival. We've not seen any indication of it functioning in orbit, which aligns with a fear we had prior to integration.

The CAPE-3 team is devising plans to begin testing individual subsystems on the satellite to gauge the health of those. This might take a few more weeks to validate and provide an update on what capabilities we can still carry out, as we update our ground systems."

Additional updated information on CAPE-3 may be found at: https://bit.ly/2O6t1Nj

Rizwan continues: "If anyone is able to switch their iGates, or make a UHF iGate to help track CAPE-3 email packets, we'd be really grateful for the help! We've turned on one at our University as well.
1.) We are expecting UHF APRS on 437.325, the same as what our FSK and AX.25 packets are coming across on.
2.) From what I can tell, our NORAD ID is 47309.
3.) Currently we are having some issues commanding CAPE-3 from our University lab, so once we are able to transmit commands, we'll be able to set the APRS emails to come across more often, and begin experimenting the tweeting function to see if it works as we intended.

I'd like to thank everyone who's helped so far! We got our first email packet from W7KKE-13 earlier this evening (approximately 00:45 UTC Saturday, 02/06/2021).

The SatNOGS network is getting packets fairly regularly: https://network.satnogs.org/observations/?future=0&bad=0&unknown=0&failed=0&norad=47309&observer=&station=&start=&end= "

[ANS thanks Riswan Merchant, KF5BN, for the above information]

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[ANS thanks Southgate Amateur Radio News for the above information]

ARISS Call for Proposals

New Proposal Window is February 15th, 2021 to March 31st, 2021
February 2, 2021 --- The Amateur Radio on the International Space Station (ARISS) Program is seeking formal and informal education institutions and organizations, individually or working together, to host an Amateur Radio contact with a crew member on board the ISS. ARISS anticipates that the contact would be held between January 1, 2022 and June 30, 2022. Crew scheduling and ISS orbits will determine the exact contact dates. To maximize these radio contact opportunities, ARISS is looking for organizations that will draw large numbers of participants and integrate the contact into a well-developed education plan.

The deadline to submit a proposal is March 31st, 2021. Proposal information and more details such as expectations, proposal guidelines and the proposal form can be found at www.ariss.org. An ARISS Introductory Webinar session will be held on February 25th, 2021 at 8 PM ET. The Eventbrite link to sign up is: https://ariss-proposal-webinar-spring-2021.eventbrite.com

Additional information may be found at https://www.ariss.org/

[ANS thanks David Jordan AA4KN ARISS PR for the above information]

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25% of the purchase price of each product goes
towards Keeping Amateur Radio in Space
https://www.zazzle.com/amsat_gear

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Please submit any additions or corrections to Ke0pbr (at) gmail.com
Updated 02/3/ 2021

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, and JoAnne Maenpaa, K9JKM for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

Want to see AMSAT in action or learn more about amateur radio in space? AMSAT Ambassadors provide presentations, demonstrate communicating through amateur satellites, and host information tables at club meetings, hamfests, conventions, maker faires, and other events.

AMSAT Ambassador and registered ARRL instructor Clint Bradford K6LCS has a couple Zoom presentations lined up to begin 2021. In the first week of February, an "abbreviated" presentation was given to a Southern CA ARES group. Later in the month, a "normal" show will be presented. There are up-to-five spots available for you to attend! Just send Clint an email message for details.

Would a 90-minute informative, personalized-to-your-club, FUN presentation on working the "easy" satellites would be appropriate for your club? Send Clint an email message, and let's book a date!
Contact:
Clint Bradford K6LCS
k6lcs at ham-sat dot info
909-999-SATS (7287)

[ANS thanks Paul Overn, KE0PBR, AMSAT Events page manager, for the above information]

Satellite Shorts From All Over

+ UVSQSat update

After a successful launch in December, on 2 Feb. 2021, UVSQSat switched mode from 1200 BPSK(G3RUH) to 9600 BPSK(G3RUH). Frequencies for UVSQSat are telemetry on 437.02 MHz with callsign LATMOS-1 and the repeater: 145.905 MHz Uplink, 437.02 MHz Downlink
More information on the UVSQSat mission may be found at:
https://bit.ly/3oOPYRy
(ANS thanks Christophe Mercier of AMSAT Francophone for the above information).

+ Two astronauts working outside the International Space Station on January 27 installed a European Space Agency data relay antenna and connected four of six cables to partially power a new ESA experiment platform. But the two cables they were unable to connect to the Bartolomeo platform will need to be connected later. Unable to resolve the cable trouble, they capped the two balky connectors and used tie-downs to hold all the cables in place. (ANS thanks SpaceFlight Now for the above information)

+ An update to the IC-705 Satellite Memory .CSV file has been posted at the AMSAT-SE website. Lars, SM0TGU, has fixed a bug in the PO-101 settings and has added 5 offsets for each of the FM birds. The 5 offset memory settings should make it easier to track the doppler shift of those satellites if an operator is in the field. The revised memory settings files are available at: https://www.amsat.se/2020/11/12/satellite-memory-file-for-ic-705/
(ANS thanks Lars Thunberg, SM0TGU of AMSAT-SE for the above information)

+ Twelve bottles of Bordeaux wine and dozens of vine shoots are back at home in southwest France after spending months on the International Space Station (ISS) for an unusual astrochemistry experiment. The red wine and 320 mature shoots known as canes arrived February 1 after their return to Earth via a Dragon capsule operated by SpaceX. They will be analysed at the Institute of Vine and Wine Science in Bordeaux to see how the stresses produced by zero gravity affect both grape growth and the finished product, which could spur new agricultural research. (ANS thanks Space Daily for the above information)

+ Sixty more SpaceX-owned Starlink internet satellites rocketed through a moonlit winter sky over Cape Canaveral aboard a Falcon 9 launcher early Thursday, while another Falcon 9 stood on a different launch pad a few miles away to loft another 60 Starlink payloads Friday. The first stage's landing punctuated the fifth trip to space and back for this booster, and it broke a record for the fastest turnaround between flights of a SpaceX booster, besting the previous mark of 38 days set last month.(ANS thanks SpaceFlight Now for the above information)

+ Diplomas for the AMICALSAT satellite are being sent out. If you have not yet requested them, you can do so before 28/02/2021. The request for a diploma is done by sending an email to amsatf(a)amsat-f.org indicating your callsign or the name given in the AMSAT-F database to send the data. (ANS thanks Christophe Mercier of AMSAT Francophone for the above information)

+ The first private Chinese company to reach orbit met with failure Monday (Feb. 1) during its second attempt to go to space. iSpace's four-stage Hyperbola-1 rocket failed after liftoff while attempting to carry the cubesat-sized Fangzhou-2 (Ark-2) satellite into space. Media reports indicate the launch attempt happened around 0815z from the Jiuquan Satellite Launch Center in the Gobi Desert. (ANS thanks Space.com for the above information)

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Store.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact info [at] amsat.org for additional student membership information.

73 and Remember to help keep amateur radio in space,
This week's ANS Editor, Jack Spitznagel, KD4IZ
kd4iz at frawg dot org